Notes on some Coccidae (Homoptera) from Southern Rhodesia, with descriptions of two new species.

by

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Reference to previous papers by the present writer dealing with the Coccidae of Southern Rhodesia will be found on page 221 of Volume IV of this Journal published in September 1941.

Africaspis baphiae sp.n. (Fig. 1).

Puparium of adult female white, elongated and moderately broadened posteriorly. Larval exuvium pale brown, nymphal exuvium deep orange but covered by a thin film of white secretionary matter. Secretionary appendix white, smooth, with no transverse striations. Ventral scale thin, remaining attached to the host plant, although in some specimens a narrow band remains attached round the anterior margin. On some twigs the specimens were of an uniform very dark brown, almost black, colour due apparently to incorporated extraneous matter. Length of puparium of adult female, 1.75—2.00 mm.; breadth, 0.60—0.75 mm.

Adult female prepared for microscopic examination of normal form, narrowed in front and broadest about the 1st free abdominal segment. Segmentation distinct but margins of segments only slightly produced laterally. Broad chitinised bands occur on the 1st free abdominal segment, the metanotum and on the posterior half of the mesonotum. Antennal tubercles minute, each carrying a single stout curved bristle. Anterior spiracles with from 3—5 parastigmatic glands, posterior spiracles with from 1—4. Abdominal segments with scattered large tubular spinnerets near the margin and a group of aciculate gland spines. Similar spinnerets and gland spines occur on the meso- and metathorax but in this case they extend further inwards from the margin.

Pygidium broadly rounded with a pair of prominent median lobes, these lobes are united over their basal halves, rounded apically but falling away laterally. In some examples the lateral margins are faintly serrated and a poorly developed lateral notch is discernible. Lateral lobes wanting. On either side of the median lobes there are at intervals four marginal pores each associated with a tooth-shaped prominence. A single small gland spine occurs between the median lobe and 1st tooth-shaped prominence, two between the 1st and 2nd, 2nd and 3rd, and 3rd and 4th prominences; in the case of each of these pairs one of the spines is always longer

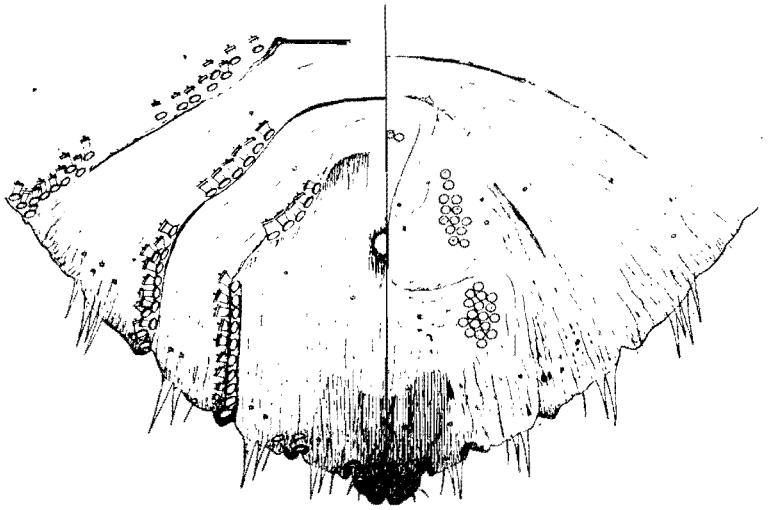

Fig. 1. *Africaspis baphiae* sp.n.: Pygidium of adult ♀, × 225.

than the other. Beyond the 4th prominence is a group of four or five gland spines. Each gland spine with a single microduct. Circumgenital glands in 5 groups: median, 3—7, anterior laterals, 11—15, posterior laterals, 15—23; average of 9 examples 4 : 13 : 17. Anal orifice small, situated rather nearer the base than the apex of the pygidium. Dorsal pores in the two inner series in a more or less single line. Both series are interrupted in the median region and again about midway between the median line and the margin.

On *Baphia racemosa* (Leguminosae), at the 60 mile peg from Bulawayo on the Bulawayo to Victoria Falls road, 2.vii.40; on the smaller branches.

This species is very close to *Africaspis chionaspiformis* Newst. from which it differs in the nature of the median lobes which in *chionaspiformis* have a deep lateral notch and no sign of lateral serrations. The dorsal pores on the pygidium are also relatively smaller than in the case of *chionaspiformis*, fewer and with a more regular arrangement.

Clavaspis herculeana Doane and Hadden.

Aspidiotus herculeanus Doane and Hadden, 1909, Can. Ent. Vol. 41, p. 298.
Aspidiotus subsimilis var. *anonae* Houser, 1918, Ann. Ent. Soc. Am. Vol. 11, p. 163.
Clavaspis subsimilis var. *anonae* MacGillivray, 1920, The Coccidae, p. 391.
Chrysomphalus alluaudi Mamet, 1936, Proc. Roy. Ent. Soc. London, V. (5), p. 93.
Clavaspis herculeana Ferris, 1937, Microentomology, 11, (2), p. 53.
Clavaspis herculeana Ferris, 1938, Atlas of the Scale Insects of N. America, S. 11, 206.

On *Bauhinia acuminata* (Leguminosae), Umtali, November 1940, ex. coll. Dept. Agric. Salisbury No. 5155 per A. Cuthbertson, on seedlings.

In March 1941 Capt. C. Smee of the Department of Agriculture, Nyasaland, sent me some specimens of a scale insect attacking Tung Oil trees for examination. I identified this material as *Clavaspis herculeana*, but it seemed strange to find this species turning up in Nyasaland when as Ferris states " although the species was first described from Tahiti it is in all probability of New World origin." Further examination of some Mauritian material about the same time led me to the conclusion that *Chrysomphalus alluaudi* Mamet was synonymous with *C. herculeana* and this has since been confirmed by Dr. Mamet. By a strange coincidence an examination of some infected Bauhinia seedlings from Umtali a little later showed that the species also occurred in Southern Rhodesia.

Specimens from S. Rhodesia, Nyasaland and Mauritius agree very closely with Ferris' excellent description and figures in his Atlas (*l.c.*).

Furchadaspis rhusae (Brain).

Furchadiaspis rhusae Hall, 1941, Journ. Ent. Soc. S. Africa, Vol. IV, p. 230.

Mr. Laing of the British Museum has drawn my attention to the fact that MacGillivray's genus is *Furchadaspis* and not *Furchadiaspis* as quoted by Ferris (Microentomology, Vol. 1, pp. 21 and 24, 1936 and Atlas of the Scale Insects of N. America, Series 1, 58 and 59, 1937). Unfortunately this point was overlooked by the writer and the incorrect spelling of Ferris was followed in referring Brain's *Diaspis rhusae* to MacGillivray's genus (*l.c.*).

Poliaspis parinarii sp.n. (Fig. 2).

Puparium of adult female elongate, convex and broadened posteriorly. Exuvia orange, covered by a thin film of white secretionary matter. Secretionary appendix white. The entire puparium has so much extraneous matter incorporated in it that it cannot be distinguished from the background on which it rests; the presence of a puparium can be detected by reason of its convexity. The ventral scale remains attached to the host plant with the exception of a narrow band which comes away attached to the margin of the dorsal scale.

Length of puparium of adult female, 2.0—2.5 mm.; breadth, 0.7—1.0 mm.

Male puparium white, small and elongate with golden exuvium; no longitudinal carinae present. In some examples, more especially those lying along the midribs on the underside of the leaves, the puparia are covered by a dense mass of silky grey fibres.

Adult female prepared for microscopic examination pyriform with margins of free abdominal segments produced laterally. In

old adult specimens the entire thoracic region is highly chitinised: the pygidium is also chitinised but to a very much lesser degree. Antennae represented by minute tubercles produced into one, two or three pointed projections and with usually two stout bristles arising from the base. Anterior spiracles with from 3—6 parastigmatic glands. Prepygidial segments and metanotum with dorsal pores numerous in the marginal region; in the former case these extend right across the segments in a more or less regular and unbroken single line. Groups of tubular spinnerets of a smaller size associated with both anterior and posterior spiracles. Groups of gland spines also occur on the prepygidial segments and metathorax in the marginal region.

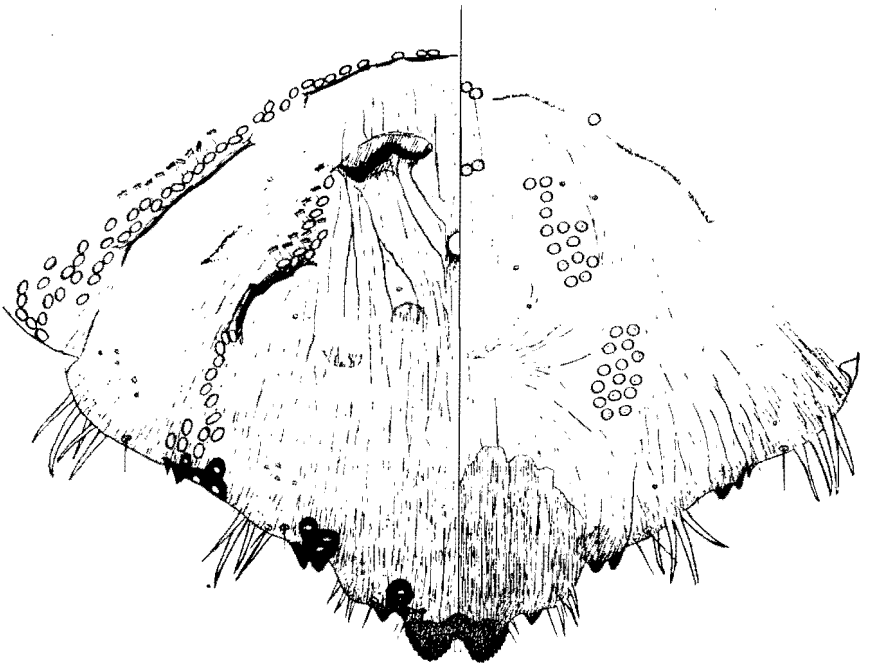

Fig. 2. *Poliaspis parinarii* sp.n.: Pygidium of adult ♀, × 340.

Pygidium broadly triangular with a pair of well-developed median lobes which have a space only about $\frac{1}{4}$ the width of the base of one separating their bases; these lobes are more or less triangular, rounded at the apex and finely but distinctly serrated. Two short setae occur between the lobes. Other lobes wanting, but tusk-like projections, associated with marginal pores, occur as shown in the figure; the innermost projection, just lateral of the

median lobes on either side, is single, the next usually double, whilst in the third situated towards the base of the pygidium, two or three such projections may occur. Between the median lobes and 1st projection on either side is a single gland spine, between the 1st and 2nd groups of projections are three spines, between the 2nd and 3rd usually four longer spines of varying lengths and between the 3rd and the base of the pygidium a group of four or five even larger spines. Associated with the 1st projection is a single marginal pore set in highly chitinised tissue; three similar pores, also surrounded by chitinised tissue, with the second projection and three or four with the third projection. Dorsal pores confined to one rather irregular series broken in the median region and midway between the median line and the margin. Anal orifice situated towards the base of the pygidium.

Circumgenital glands in two series: inner series consisting of 5 groups, median 3—7, anterior laterals 8—18, posterior laterals 10—21 (average of 26 examples 4 : 13 : 15); outer series consisting of a median group of 3—7 and either one or both anterior laterals represented by one or two glands only.

On *Parinarium mobola* (Rosaceae), Inyanga, 6.xi.38; on the smaller branches with some male puparia on the leaves. The specimen selected as "type" is a young adult female before chitinisation of the tissues has set in.

This species is unlike any other of the genus *Poliaspis* known to the writer. Of the four species recorded from Southern Africa it bears more relation to *kiggelariae* Brain and its variety *allophylli* Hall and *carissae* Brain than to *argentata* Hall. It differs from the first three mentioned in the median lobes being set closer together and in the more numerous and conspicuous gland spines on the pygidial fringe as well as in several other respects. The nature of the pygidial fringe in *parinarii* is reminiscent of the genus *Africaspis*, particularly in respect to the number and character of the gland spines, but the presence of more than five groups of circumgenital glands places it in the genus *Poliaspis* as at present understood.

Ferrisia virgata Ckll.

Pseudococcus virgatus Morrison, 1920, Philippines Journal Science, XVII, (2), p. 171.

Pseudococcus virgatus Green, 1922, Coccidae of Ceylon, V, p. 371.

Ferrisia virgata Fullaway, 1923, Proc. Hawaii Ent. Soc. V, (2), p. 311.

On Madagascar Beans, Gatooma, Feb. 1940, ex coll. Dept. Agric. Salisbury, No. 5158; on *Poinsettia* sp. (Euphorbiaceae), Gatooma, 1.v.41, ex coll. Dept. Agric. Salisbury, No. 5417, said to be a heavy infestation on the branches.

Southern Rhodesian material agrees closely with authentic specimens of this species from other parts of the world in the writer's collection.

Aspidoproctus bifurcatus Thorpe.

Thorpe, 1940, Proc. Roy. Ent. Soc. London, IX, (10), p. 165.

On *Cassia* sp. (Leguminosae), Mazoe, 12.i.38 and *Berlinia globiflora* (Leguminosae), Inyanga, 6.xi.38. In both cases the specimens were on the smaller branches. This species has been very fully and carefully described by Dr. Thorpe from material collected in Tanganyika Territory and from the material collected on Berlinia in Southern Rhodesia. It is not unlikely that it will be found to be widely distributed throughout the Colony.